97TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
2d Session } { No. 97-745

EXPRESSING THE SENSE OF THE CONGRESS THAT, TO ENCOURAGE EDUCATIONAL PROGRAMS IN SCIENCE AND TECHNOLOGY, A NATIONAL SCIENCE CENTER FOR COMMUNICATIONS AND ELECTRONICS SHOULD BE ESTABLISHED

AUGUST 13, 1982.—Referred to the House Calendar and ordered to be printed

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Mr. FUQUA, from the Committee on Science and Technology, submitted the following

REPORT

[To accompany H. Con. Res. 204]

The Committee on Science and Technology, to whom was referred the concurrent resolution (H. Con. Res. 204) expressing the sense of the Congress that, to encourage educational programs in science and technology, a National Science Center for Communications and Electronics should be established, having considered the same, report favorably thereon without amendment and recommend that the concurrent resolution do pass.

LEGISLATIVE HISTORY

On October 20, 1981, Mr. Doug Barnard, Jr. (Democrat of Georgia) introduced House Concurrent Resolution 204. On August 3, 1982, the Committee on Science and Technology by unanimous voice vote ordered reported House Concurrent Resolution 204.

PURPOSE OF HOUSE CONCURRENT RESOLUTION 204

The purposes of this concurrent resolution are to: encourage educational programs in science and technology; and to support the establishment of a national science center dedicated to electronics and communications that would promote the interest of the public at large in science and technology and tie the academic, corporate, and governmental worlds together in an effort to increase interest and educational opportunities in those fields.

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BACKGROUND

Since World War II, the United States has been a world leader in science and technology. American research and development programs, supported and conducted in the public and private sectors, have maintained our world leadership position in research and have significantly contributed to the quality of education and the educational process. However, America's international position in both science and technology is currently being challenged. The national security and the economic and social well-being of the United States will in large measure rest on the ability of our country to remain in the vanguard of the expanding frontiers of science and technology.

A nation's science and technology capabilities are directly related to the quality of education at all levels. Initiatives to improve the scientific and technical education for all citizens must incorporate mechanisms to provide access to scientific and technical information. The cooperative efforts of industry, academia, and government are necessary to expand public awareness of the need for excellence in science and technology.

In some critical fields such as engineering and computer science, universities, industry, and the armed services are experiencing difficulties in recruiting and retaining qualified professional scientists. In addition, the educational opportunities for technicians who work directly with science and engineering professionals need to be enhanced to keep pace with the demand and the changing educational requirements resulting from rapid advances in technology. The primary and secondary school curricula of several industrialized countries, including West Germany, Japan, and the Soviet Union, focus heavily on science and mathematics. In contrast, the emphasis placed by the United States on those subjects during the past two decades has declined. Furthermore, limited information is available to secondary school students about opportunities for careers in technical fields which require training and preparation in science.

FINDINGS

The following findings regarding the need to enhance and encourage educational programs in science and technology were based on the report to Congress entitled, "The 5-Year Outlook on Science and Technology 1981," and mandated by Title II of the Science and Technology Policy, Organization, and Priorities Act of 1976:

> Science and technology and education and intimately linked. Science, mathematics, and technology are significant components of all educational curriculum and also provide powerful tools that are broadly applicable in the educational process itself. For example, recent advances in communications and electronics and in cognitive science offer major opportunities for improving educational strategies.
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> An adequate supply of well trained scientists, engineers, and technicians is imperative to insure that the long-range ability of the United States to sustain achievements in science and technology is maintained. The number of professions and

occupations that presently require a moderate level of competence in science and technology is rapidly increasing. Since numerous public policy issues have significant science and technology components, an improved level of understanding of science and technology among the general public is becoming increasingly desirable.

New demands are being placed on the educational system to prepare all segments of society to use technological information and products. Computer-based learning devices and communications technologies can provide the basis of effective and efficient education strategies. Increased industry involvement is a potential mechanism for facilitating the technology transfer process and could be of mutual benefit to both the educational system and the industries involved.

Since the decline in science and technology literacy among the American public has been evident for over a decade, and since its causes are complex, a variety of initiatives are necessary to arrest and reduce this decline. The most important priority is to recognize the severity and complexity of the problem and to initiate effective long-term programs. The Federal Government's role in assisting vocational and secondary schools as well as community and degree colleges to provide more appropriate opportunities for citizens to study science and mathematics is necessarily limited. The success of new initiatives and institutional arrangements to reduce science literacy will depend on the cooperation and complementary activities of many sectors of society, including industry, Federal, State and local governments, community organizations, professional associations, and university and industrial scientists and engineers who engage in public service activities.

The public understanding of science and technology has been enhanced by the establishment and support of science and technology museums, planetariums, zoos, and science and nature centers. These non-academic programs are extremely effective when they incorporate mechanisms to provide access to scientific and technical information and assist citizens in utilizing the information in the environment in which they live and in which they respond to the everyday problems they encounter. Science centers enjoy considerable popularity and can serve as important adjuncts to the formal educational system and to other informal systems.

The establishment of a National Science Center for Communications and Electronics would assist in promoting the interest of the public at large in science and technology, in helping recruit young people into the fields of communications and electronics, in developing new skills for the current work force, and in reinforcing the communications and electronics training of military students from the armed services and from allied nations. Concomitantly, the proposed science center concept could serve as an operational model to demonstrate the application of communications and electronics technologies and their potential opportunity to enhance the educational process.

COMMITTEE RECOMMENDATIONS

On August 3, 1982, the Committee on Science and Technology ordered favorably reported the concurrent resolution by unanimous voice vote.

COMMITTEE OVERSIGHT—FINDINGS AND RECOMMENDATIONS

Pursuant to Clause 2(l)(3), Rule XI of the Rules of the House of Representatives, under the authority of Clause 2(b)(1) and Clause 3(f), Rule X, the Committee's oversight findings and conclusions are reflected in the recommendations found in the present concurrent resolution and report.

EFFECT OF LEGISLATION ON INFLATION

In accordance with Rule XI, Clause 2(l)(4) of the Rules of the House of Representatives, this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy.

SUMMARY OF COMMITTEE ON GOVERNMENT OPERATIONS FINDINGS AND RECOMMENDATIONS

Pursuant to Clause 2(b)(2), Rule X, and Clause 2(l)(3), Rule XI of the Rules of the House of Representatives, no findings or recommendations have been submitted by the Committee on Government Operations for inclusion in this report.

CHANGES IN EXISTING LAW MADE BY THE RESOLUTION, AS REPORTED

In compliance with clause 3 of Rule XIII of the Rules of the House of Representatives, no changes in existing law are made by the concurrent resolution, as reported.

CONGRESSIONAL BUDGET ACT INFORMATION

This resolution provides for no new authorization and consequently the provisions of Section 308(a) of the Congressional Budget Act of 1974 are not applicable. No authorization for State or local financial assistance is included in the resolution.

CONGRESSIONAL BUDGET OFFICE ESTIMATES

The following information pursuant to Section 403 of the Congressional Budget Act of 1974 has been provided to the Committee on Science and Technology by the Congressional Budget Office.